agri-fax Alberta AGRICULTURE

88-05367/

Agdex 100/81-5

January, 1987

1985 Average Analysis of Alberta Feeds

The data in this report are a summary of the results of analyses on feeds received for analysis at the Agricultural Soils and Animal Nutrition Laboratory in 1985. This information has been prepared to provide producers, agribusiness, veterinarians, researchers and government staff with current information about the average nutrient content of feeds grown in Alberta. It is important to remember, however, that the nutrient content of an individual sample can be markedly different from the average for that feed type. More information about the ranges and standard deviation in nutrient content that can be expected can be obtained from the publication *Average Analysis of Alberta Feeds, 1976-80*, Agdex 100/81-2.

All of the analyses presented in this report, except for bushel weights in grains, are expressed on a moisture-free basis. The following abbreviations have been used in Table 2: copper (Cu), manganese (Mn), zinc (Zn), aluminum (Al), cobalt (Co), iron (Fe), magnesium (Mg), potassium (K), sodium (Na), sulphur (S) and selenium (Se).

TABLE 1: AVERAGE ANALAYSIS OF ALBERTA FEEDS 1985

	Number of Samples	Bushel Wt.(lb)	Moisture (%)	Protein (%)	Calcium (%)	Phosphorus (%)
Grains						
Barley	326	46.8	13.3	13.0	0.06	0.34
Oats	94	39.3	11.5	11.3	0.08	0.30
Wheat	30	57.4	13.3	15.7	0.06	0.35
Field peas	24	60.6	11.9	27.1	0.11	0.41
Fababeans	2	59.5	14.5	29.9	0.09	0.41
Canola	7	46.9	9.1	17.7	0.57	0.74
High moisture barley	18	— —	26.9	14.0	0.06	0.34

	Number of Samples	Moisture (%)	Protein (%)	Fibre (ADF) (%)	Calcium (%)	Phosphorus (%)
Hays						
Legume (unsp.)	8	12.9	18.8	27.8	2.08	0.19
Alfalfa	249	14.7	17.8	32.4	1.83	0.21
Clover	14	18.0	14.6	37.7	1.42	0.17
Alfalfa-grass	470	15.2	13.7	32.6	1.28	0.18
Clover-grass	164	16.8	10.0	38.8	0.77	0.16
Legume-grass	675	15.4	12.7	34.1	1.15	0.17
Grasses (unsp.)	40	13.6	11.3	35.0	0.55	0.17
Native grass	15	14.5	9.5	36.4	0.43	0.15
Slough grass	20	15.5	9.9	35.1	0.39	0.15
Brome	34	16.4	11.7	34.5	0.51	0.16
Timothy	23	15.3	7.6	37.5	0.42	0.13
Crested wheat-grass	11	13.5	13.3	32.6	0.33	0.14
Fescue	7	14.8	10.6	31.9	0.56	0.17
Orchard grass	7	17.6	16.4	31.2	0.42	0.26
Meadow foxtail	3	9.9	14.5	29.5	0.41	0.19
Rye grass	3	16.8	9.8	36.0	0.34	0.16
Kentucky blue grass	2	10.8	14.2	32.2	0.37	0.18

Copies of this and related publications may be obtained from the Print Media Branch, Alberta Agriculture, 7000 - 113 Street, Edmonton T6H 5T6 or Alberta Agriculture's District Offices.

	Number of Samples	Moisture (%)	Protein (%)	Fibre (ADF) (%)	Calcium (%)	Phosphorus (%)
Greenfeeds						
Barley	146	18.8	12.2	32.5	0.39	0.23
Oats	241	18.1	10.6	34.0	0.36	0.21
Wheat	84	16.2	10.0	34.2	0.20	0.17
Rye	23	16.9	9.0	37.0	0.23	0.15
Canola	8	18.6	14.5	44.2	1.22	0.29
Durum wheat	2	15.8	9.4	30.2	0.23	0.17
Silages						
Barley	133	62.7	12.4	30.1	0.44	0.26
Oats	39	54.8	12.1	35.4	0.42	0.24
Rye	5	61.9	10.5	36.9	0.37	0.20
Corn	21	74.7	10.2	31.7	0.24	0.24
Mixed cereal	16	56.2	13.9	30.0	0.47	0.26
Canola	11	64.5	14.5	40.7	0.31	0.49
Faba bean	2	74.5	17.9	31.0	1.18	0.23
Alfalfa	18	61.5	17.8	34.2	1.75	0.23
Clover	9	64.0	14.4	37.9	1.38	0.16
Wheat	4	54.8	12.4	32.9	0.51	0.20
Silage (unsp.)	32	59.0	13.8	34.0	1.00	0.23
Alfalfa-grass	40	60.0	14.6	35.0	1.39	0.21
Clover-grass	27	58.4	14.3	35.2	1.02	0.19
Legume-grass	68	59.5	14.5	35.2	1.24	0.20
Straws						
Wheat	43	13.6	5.2	47.2	0.23	0.08
Oats	24	15.3	6.6	42.3	0.33	0.11
Barley	118	14.4	7.2	43.8	0.36	0.12
Mixed cereal	14	13.6	7.4	45.8	0.45	0.13
Chaff						
Mixed cereal	5	12.1	6.8	34.6	0.28	0.10
Oats	2	11.6	7.1	35.1	0.26	0.10
Canola	1	10.1	13.9	42.6	1.96	0.34
Screenings						
Mixed cereal	5	11.4	13.7	11.6	0.15	0.32
Protein Supplements						
Soybean meal	8	10.5	48.0	—	0.49	0.70
Canola meal	52	9.2	40.8	13.7*	0.76	1.14

* crude fibre

TABLE 2: AVERAGE MACRO AND TRACE MINERAL CONTENTS OF 1985 ALBERTA FEEDSTUFFS

	Number of Samples	Parts Per Million (ppm)						Per Cent (%)				Parts Per Billion
		Cu	Mn	Zn	Al	Co	Fe	Mg	K	Na	S	Se*
Grains												
Oats	6	6.5	48.9	37.5	103	—	67	0.16	0.46	0.01	0.22	111(11)
Barley	31	7.9	24.9	49.1	20	—	126	0.16	0.53	0.03	0.17	129(58)
Wheat	1	—	—	—	—	—	—	—	0.22	0.69	—	— 405(2)
Mixed cereals	36	7.8	29.3	47.2	20	—	117	0.16	0.52	0.03	0.18	134(71)
Faba beans	1	11.0	11.5	58.2	—	—	62	—	1.05	—	—	115(1)
Canola	1	8.1	55.1	70.1	—	—	238	0.42	0.77	—	—	97(1)
Hays												
Wheat	10	3.0	58.7	23.1	165	—	217	0.17	1.14	0.01	0.20	190(5)
Oats	20	4.8	61.8	33.1	103	1.36	428	1.21	2.63	0.16	0.22	427(28)
Barley	2	4.0	24.9	23.3	—	—	144	0.22	0.92	0.11	—	318(16)
Alfalfa	52	4.4	29.0	23.8	39	—	170	0.32	1.71	0.02	0.22	253(77)
Alfalfa-grass	114	4.1	39.7	22.6	48	—	125	0.30	1.70	0.02	0.21	312(168)
Clover-grass	34	6.6	59.4	26.8	115	—	169	0.28	1.64	0.01	0.12	168(34)
Legume-grass	148	4.7	44.3	23.6	54	—	133	0.30	1.68	0.02	0.16	290(204)
Grass (unsp.)	8	3.3	36.1	21.8	23	—	66	0.16	1.39	0.01	0.14	349(15)
Brome	5	4.8	76.8	15.2	—	—	106	0.14	1.37	0.02	—	269(9)
Timothy	1	2.6	24.5	20.4	—	—	83	0.16	1.51	—	—	214(5)
Rye	1	5.9	35.7	27.2	—	—	148	0.10	1.42	—	—	371(4)
Clover	1	—	—	—	—	—	—	—	—	—	—	326(1)
Silages												
Oat	3	4.3	75.6	33.9	64	0.95	147	0.19	1.39	0.11	0.18	49(7)
Barley	23	4.6	36.6	37.7	—	0.64	283	0.25	1.53	0.31	0.22	117(38)
Rye	3	3.1	51.6	29.2	—	—	225	0.28	1.59	—	—	109(2)
Corn	3	6.0	31.4	36.7	—	—	—	0.22	1.50	0.01	0.17	43(4)
Alfalfa	5	5.0	29.3	19.2	—	—	151	0.32	2.02	0.02	0.32	323(12)
Alfalfa-grass	13	5.0	44.7	27.2	37	—	169	0.25	1.76	0.02	0.29	44(23)
Clover-grass	2	6.7	89.9	32.2	—	—	102	0.32	1.89	0.03	—	105(4)
Legume-grass	15	5.2	51.1	27.8	37	—	163	0.26	1.78	0.02	0.29	366(27)
Silage (unsp.)	3	5.6	33.9	23.8	—	—	330	0.24	1.44	0.36	0.17	159(7)
Canola	—	—	—	—	—	—	—	—	—	—	—	151(3)
Clover	—	—	—	—	—	—	—	—	—	—	—	272(2)
Straws												
Oats	5	3.3	49.6	22.2	—	—	229	0.20	1.80	0.13	0.11	9(1)
Barley	9	2.9	15.7	19.0	—	—	185	0.13	1.30	0.35	0.13	143(8)
Mixed cereal	16	3.5	30.3	20.9	—	2.56	237	0.16	1.42	0.23	0.12	171(14)
Wheat	—	—	—	—	—	—	—	—	—	—	—	281(3)
Protein Supplement												
Canola Meal	21	4.2	58.0	66.8	—	—	208	0.64	1.25	0.01	1.09	875(21)

** For Se, value in brackets refers to number of samples.*

Prepared by: Abdul Suleiman, P.Ag. Animal Nutrition Section, Beef Cattle & Sheep Branch

1987 02 3M